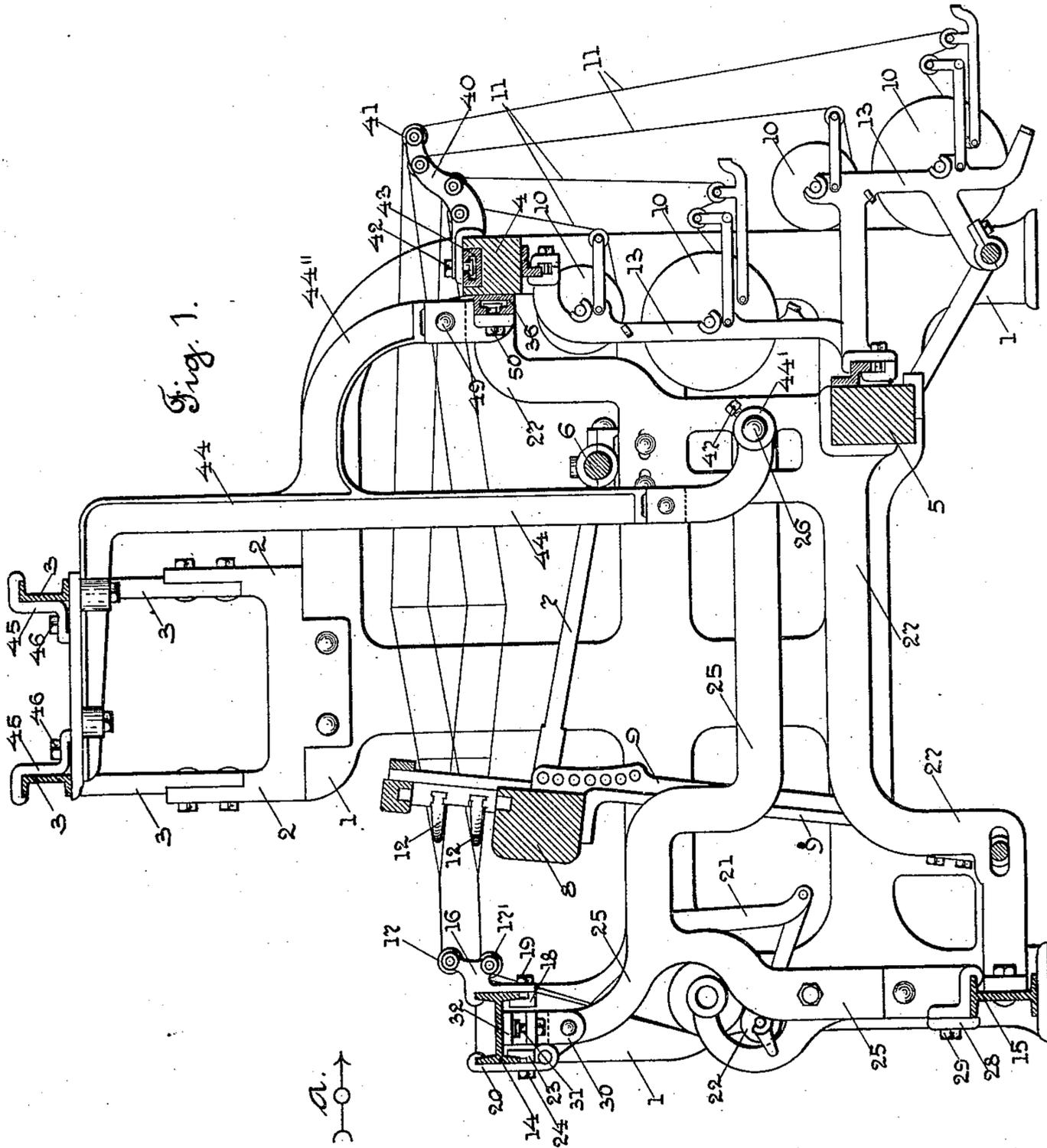


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 NARROW WARE LOOM.  
 APPLICATION FILED SEPT. 27, 1906.

Patented Apr. 6, 1909.  
 2 SHEETS—SHEET 1.

917,435.



Witnesses  
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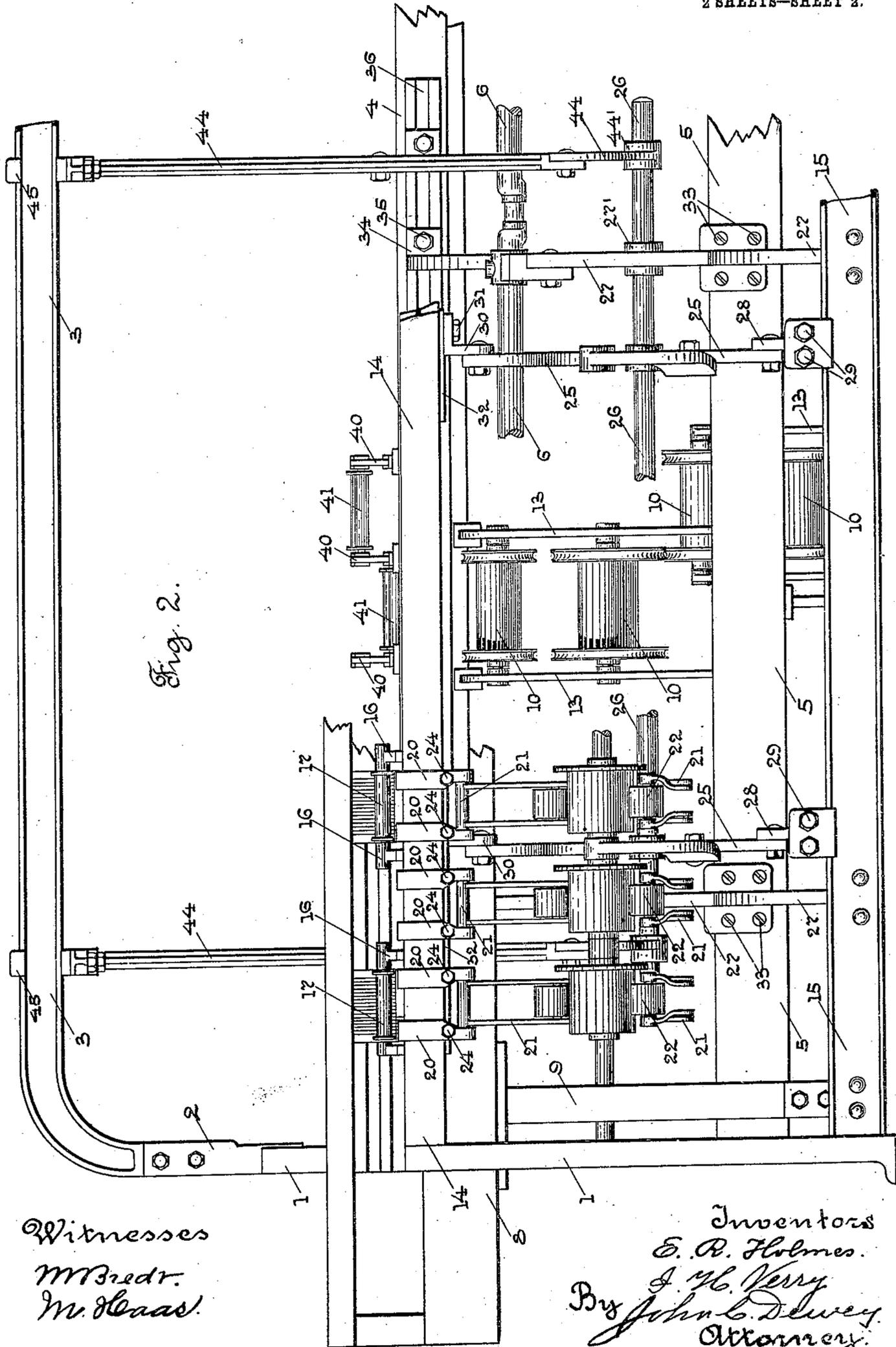


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## NARROW-WARE LOOM.

No. 917,435.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed September 27, 1906. Serial No. 336,427.

*To all whom it may concern:*

Be it known that we, ELBRIDGE R. HOLMES and IRVING H. VERRY, citizens of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have jointly invented certain new and useful Improvements in Narrow-Ware Looms, of which the following is a specification.

Our invention relates to looms, and particularly to narrow ware looms for weaving tape, ribbon, etc.

The object of our invention is to improve upon the frame construction of looms of the class referred to, and more particularly the construction of the fastenings for the stands for the spools, and for the rolls, so as to make them adjustable; and also for the intermediate girts and the intermediate arch braces of the frame to make them adjustable.

It is sometimes necessary in narrow ware looms to have the loom changed from one width of web, to a narrower or wider width, and it is very desirable to do this without being obliged to change the loom all over. In a narrow ware loom of our improved construction, it is only necessary to have a new lay put in, and then adjust the stands for the spools and for the rolls, and adjust the intermediate girts and the intermediate arch braces, according to the width of the new web to be woven. In our improved loom, the stands for the spools and for the rolls, and the intermediate girts, and the intermediate arch braces are not permanently fastened to stationary beams as is customary, but are secured upon I beams with clamps, and upon T slotted rails in a suitable manner, so that they may be readily adjusted when desired.

We have only shown in the drawings detached portions of a narrow ware loom embodying our improvements, sufficient to enable those skilled in the art to understand the construction and operation thereof.

Referring to the drawings:—Figure 1 is a cross section of a two bank shuttle narrow ware loom, embodying our improvements, and, Fig. 2 is a front view of the parts shown in Fig. 1, looking in the direction of arrow *a*, same figure; some of the parts shown in Fig. 1 are broken away.

In the accompanying drawings, the loom side or end frame 1, the arch stands 2, arches 3, the wooden beams 4, and 5, at the rear of the loom, the crank shaft 6, the crank con-

necter 7, the lay 8, and the lay sword 9, may all be of the usual and well known construction in narrow ware looms. The warp beams 10, carrying the warps 11 for the shuttles 12, are mounted in the usual way in stands 13, which stands are adjustably secured in position, to be moved in the direction of the length of the loom, in this instance in the manner shown and described in U. S. Reissue Letters Patent, No. 11,288, of November 29, 1892.

We will now describe our improvements.

We provide two rails or beams preferably of I shape, one 14, secured to the upper front ends of the loom sides or end frames, in place of the usual breast beam, and the other, 15, secured to the lower front ends of the loom sides or end frames.

The guide spool stands 16, carrying guide rolls 17, and 17' for the woven fabric, are adjustably secured upon the inner side or edge of the upper I beam 14, in this instance by clamps 18, and bolts 19, see Fig. 1, so that the stands 16 may be adjusted in the direction of the length of the loom.

The stands or brackets 20 carrying the hangers or supports 21 for the take-up rolls 22, are adjustably secured upon the outer side or edge of the upper I beam 14, in this instance by clamps 23 and bolts 24, so that said stands or brackets 20 may be adjusted in the direction of the length of the loom.

The rear end of the intermediate cross girt 25 is supported in this instance on a longitudinally extending rod 26, supported in a hub 27' on the stationary center girt 27, whereby said intermediate cross girt 25 may be adjusted in the direction of the length of said rod. The front lower end of the girt 25 is adjustably secured to the upper edge of the lower I beam 15 by a clamp 28 and bolts 29. The upper front end of the girt 25 is adjustably attached, through a clamp 30 and T headed bolt 31, to a T slotted rail 32 attached to the underside of the upper I beam 14, so that the girt 25 may be adjusted as desired, in the direction of the length of the loom, according to the different widths of the web to be woven on the loom, to allow of the proper arrangement of the spools and other parts.

The center girt 27, see Fig. 1, is permanently secured at its front end by bolts to the inner side of the lower I beam 15, and is also secured by screws 33 to the lower wooden

beam 5. The rear upper end of the girt 27 is secured to the wooden beam 4, through a clamp 34 and T headed bolt 35 extending into a T slotted rail 36 attached to the front side of the beam 4, see Fig. 2.

The stands 40, carrying the guide rolls 41 for the warps 11 are adjustably secured upon the upper side of the beam 4, by means of T headed bolts 42 extending into a T slotted rail 43 on the upper side of said beam 4. The intermediate arch braces 44 are adjustably secured at their upper ends by clamps 45 and bolts 46 to the two arches 3, to be moved in the direction of the length of said arches, and the lower end of the arch braces 44 has a hub 44' thereon, which is loosely mounted on the rod 26 and secured thereon by a set screw 47, see Fig. 1. The arch braces 44 have a rearwardly extending foot 44'', which is adjustably attached, through a clamp plate 49 and a T headed bolt 50, to the T slotted rail 36 secured to the front side of the beam 4, see Fig. 1.

By means of our improvements, we provide for the ready adjustment, in the direction of the length of the loom, of the guide spool stands carrying the guide rolls at the front of the loom, of the brackets carrying the hangers or supports for the take-up rolls at the front of the loom, of the intermediate girts at their front and rear ends, of the

stands carrying the guide spools for the warps at the rear of the loom, and of the intermediate arch braces, all of said adjustments to be made in the direction of the length of the loom, so as to change the loom from one width of web to a narrower or wider width.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a narrow ware loom, the combination with a beam at the upper front part of the loom, a beam at the lower front part of the loom, and a rod extending in the direction of the length of the loom, of intermediate girts adjustably attached to said beams, and to said rod, to be moved in the direction of the length of the loom.

2. In a narrow ware loom, the combination with the arches, a beam at the rear upper part of the loom, and a rod extending in the direction of the loom, of intermediate arch braces adjustably attached to said arches and to said beam, and to said rod, to be moved in the direction of the length of the loom.

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